

Abstract

Devices and methods for controlling a boiler system. One illustrative method includes controlling the bypass temperature by increasing the firing rate of the boiler. Further methods include bypass temperature control methods wherein both regular and 5 fast control methods are used, where the regular method operates to control bypass temperature by using, first, a bypass valve, and second, possible increases in firing rate. The fast control method responds to particular situations suggesting potential condensation in a primary heat exchanger to increase firing rate without waiting for a bypass valve to fully open. Further embodiments include controllers programmed for or 10 containing programming for performing steps of the method embodiments, as well as systems incorporating such controllers.